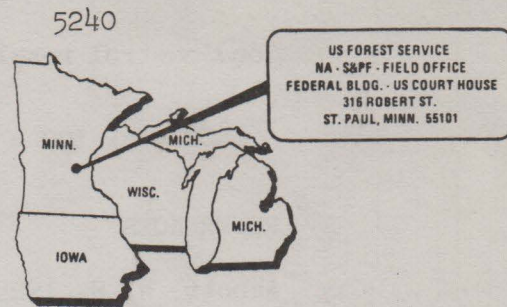


US DEPARTMENT OF AGRICULTURE
FOREST SERVICE



Northeastern Area
State & Private Forestry
DIVISION OF FOREST PEST CONTROL



Report S-69-20

September 1969

RESULTS OF SARATOGA SPITTLEBUG CONTROL WITH
MALATHION LV ON THE HIAWATHA NATIONAL FOREST

R.F. Fowler

INTRODUCTION

A Saratoga spittlebug, Aphrophora saratogensis(Fitch), outbreak on plantation red pine was found in the fall of 1968 on the Rapid River Ranger District (Millers, 1968). The outbreak occurred in a 90 acres plantation (P 17a,b, and 20a; T 40 & 41N, R 22W, Sec. 5 & 34). The nymphal survey in the spring confirmed the presence of a high population (Fowler, 1969). The Forest developed a control project to spray the area with Malathion LV (95% technical) at the rate of 10 fl oz. per acre. The insecticide was applied by fixed wing aircraft on August 7, 1969.

METHODS

The effectiveness of the control was determined by comparing the pre- and post-spray spittlebug populations using Abbott's (1925) formula. The calculations are as follows:

$$\% \text{ control} = \frac{A-B}{A} \times 100$$

Where,

A = number of spittlebugs before spraying

B = number of spittlebugs after spraying.

The spittlebug populations were determined by sweeping the trees and counting the number of adults. In the pre-spray survey 25 trees were swept in lines across the planned swath of the aircraft. In the post-spray survey 50 trees were swept along the same lines. The number of adults counted in the pre-spray survey was doubled in the calculations to adjust for the smaller sample. The pre-spray survey was made two days before treatment and the post-spray survey was done one day after treatment.



RESULTS

Good control results were obtained.

$$\frac{A-B}{A} \times 100 = \frac{37 \times 2 - 4}{37 \times 2} \times 100 = 94.6\% \text{ control}$$

REFERENCES

Abbott, W. S. 1925. A method of computing effectiveness of an insecticide. Jour.Econ. Entomol. 18: 256-257.

Fowler, R. F. 1969. Results of Saratoga spittlebug nymphal survey on the Hiawatha National Forest. USDA Forest Service NA - S&PF St. Paul FO Rpt. S-69-5, 2 p.

Millers, I. 1968 Biological evaluation of Saratoga spittlebug as based on 1968 scar count surveys on National Forests in the Lake States, USDA Forest Service, NA-S&PF, St. Paul FO Rpt. S-68-13, 18pp.